

GENERAL SPECIFICATION

PIPING VALVES VESSELS

GS EP PVV 001

Correspondence between Elf and Total Piping material classes

06	05/2015	Organisation change – January 2015
05	10/2012	New revision
04	01/2011	New revision
03	10/2005	Addition of “EP” root to GS identification
00	02/2002	First issue
Rev.	Date	Purpose of the revision

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1. Scope

This specification is a guide to substitute the correct “Total piping class” according to **GS EP PVV 112** to a previous Elf piping class.

The hereunder charts summarise equivalencies and give significant differences.

To realize and understand all the differences, it is necessary to read the two corresponding piping classes thoroughly.

2. Reference documents

The reference documents listed below form an integral part of this General Specification.

External Documents

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the effective date of this document.

Reference	Title
SG TUY 002.P Rev 0C (11/98)	Piping Classes (Elf document)
RG_TUY.C03.P Rev A (05/92)	Piping Classes Production (Elf Aquitaine Document)
RP 1200.1 Rev 6 (06/87)	Title (???) (SNEAP Document)

Total General Specifications

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published in the applicable yearly collection.

Reference	Title
GS EP PVV 112	Piping material classes
GS EP PVV 148	Glass - Reinforced plastic Epoxy Resin Piping materials (tubes and accessories)

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3. Correspondence chart

In addition to the correspondence chart here under and to find correspondence between older “Elf Aquitaine” or “SNEA(P)” Piping classes and TOTAL actual piping classes, the Appendix 1 shall be used.

Elf	Service	Total	Service	Material	Corrosion allowance	Rating	Significant Differences are detailed into hereunder notes
B511	Slightly non corrosive liquid or gaseous hydrocarbons	B01	Hydrocarbons (gas or liquids) (non corrosive), Pressure drains, Non corrosive flare gas, Fuel gas, Fuel oil, Diesel oil, Nitrogen, Oily water sewers, Cooling water (non corrosive), non corrosive process water, Methanol, Glycol	Carbon Steel	1.27	150 RF	Note 2 + Note 3 + Note 4
No reference		B01N	Lean amine (Intermediate Sour Service)	Carbon Steel	1.27	150 RF	Note 1
No reference		B01R	Refrigerated piping (non corrosive) according to ASME 31.5	Carbon Steel	1.27	150 RF	Note 1
C511	Slightly non corrosive liquid or gaseous hydrocarbons	D01	Hydrocarbons (gas or liquids) (non corrosive), Pressure drains, Fuel oil and Nitrogen, (medium pressure) Methanol, Glycol.	Carbon Steel	1.27	300 RF	Note 2 + Note 3 + Note 4
No reference		D01S	Hydrocarbons (gas or liquids) (Severe Sour Service), Pressure drains hydrocarbons (Severe Sour Service)	Carbon Steel	1.27	300 RF	Note 1
D511	Slightly non corrosive liquid or gaseous hydrocarbons	F01	Hydrocarbons (gas or liquids) (non corrosive), LP hydraulic systems, Methanol, Glycol	Carbon Steel	1.27	600 RF	Note 2 + Note 3

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Elf	Service	Total	Service	Material	Corrosion allowance	Rating	Significant Differences are detailed into hereunder notes
	No reference	F01N	Lean amine (Intermediate Sour Service)	Carbon Steel	1.27	600 RF	Note 1
E511	Slightly non corrosive liquid or gaseous hydrocarbons	G01	Hydrocarbons (gas or liquids) (non corrosive), Production gas (HP sweet gas), Methanol, Glycol.	Carbon Steel	1.27	900 RJ	Note 2 + Note 3 + Note 24
	No reference	G01S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service), Production gas (Severe Sour Service)	Carbon Steel	1.27	900 RJ	Note 1
F511	Slightly non corrosive liquid or gaseous hydrocarbons	H01	Hydrocarbons (gas or liquids) (non corrosive), Production gas (HP sweet gas), Injection water (de-aerated sea water, non corrosive sea water), MP hydraulic systems, Methanol, Glycol	Carbon Steel	1.27	1500 RJ or Hub connectors	Note 2 + Note 3 + Note 23
	No reference	H01S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service), Production gas (Severe Sour Service)	Carbon Steel	1.27	1500 RJ or Hub connectors	Note 1
G511	Slightly non corrosive liquid or gaseous hydrocarbons	J01	Hydrocarbons (gas or liquids) (non corrosive), Production gas (HP sweet gas), Injection water (de-aerated sea water, non corrosive sea water), HP hydraulic systems, Methanol, Glycol	Carbon Steel	1.27	2500 RJ or Hub connectors	Note 2 + Note 3 + Note 23

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Elf	Service	Total	Service	Material	Corrosion allowance	Rating	Significant Differences are detailed into hereunder notes
	No reference	J01S	Hydrocarbons (gas or liquids) (Severe Sour Service), Production gas (HP gas, Severe Sour Service)	Carbon Steel	1.27	2500 RJ or Hub connectors	Note 1
	No reference	K01	Hydrocarbons (gas or liquids) (non corrosive), Production gas (HP sweet gas), Injection water (de-aerated sea water, non corrosive sea water), HP hydraulic systems, Methanol, Glycol	Carbon Steel	1.27	API 5000 or Hub connectors	Note 1
	No reference	K01S	Hydrocarbons (gas or liquids) (Severe Sour Service), Production gas (HP, Severe Sour Service)	Carbon Steel	1.27	API 5000 or Hub connectors	Note 1
	No reference	L01	Well kill fluid High Pressure Fluid Service as per ASME B31.3	Carbon Steel	1.27	API 10000 or Hub connectors	Note 1
B513	Oil field water, Dirty water drain, Service gas.	B03	Corrosive hydrocarbons (gas or liquids) (CO ₂ light corrosion), Corrosive flare gas lines (CO ₂ light corrosion)	Carbon Steel	3.00	150 RF	Note 3 + Note 4
	No reference	B05	Corrosive hydrocarbons (gas or liquids) (CO ₂ medium corrosion)	Carbon Steel	5.00	150 RF	Note 1
	No reference	B06	Corrosive hydrocarbons (gas or liquids) (CO ₂ heavy corrosion)	Carbon Steel	6.00	150 RF	Note 1
C513	Oil field water, Dirty water drain, Service gas.	D03	Corrosive hydrocarbons (gas or liquids) (CO ₂ light corrosion)	Carbon Steel	3.00	300 RF	Note 3 + Note 4

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Elf	Service	Total	Service	Material	Corrosion allowance	Rating	Significant Differences are detailed into hereunder notes
	No reference	D03N	Rich caustic, Lean caustic, Caustic soda (Intermediate Sour Service)	Carbon Steel	3.00	300 RF	Note 1
D513	Oil field water, Dirty water drain, Service gas.	F03	Corrosive hydrocarbons (gas or liquids) (CO ₂ light corrosion)	Carbon Steel	3.00	600 RF	Note 3
	No reference	F03N	Rich amine (Intermediate Sour Service)	Carbon Steel	3.00	600 RF	Note 1
E513	Oil field water, Dirty water drain, Service gas.	G03	Corrosive hydrocarbons (gas or liquids) (CO ₂ light corrosion), Corrosive production gas (HP gas, CO ₂ light corrosion)	Carbon Steel	3.00	900 RJ	Note 3 + Note 24
	No reference	G03N	Corrosive hydrocarbons (Intermediate Sour Service), Corrosive production gas hydrocarbon (Intermediate Sour Service)	Carbon Steel	3.00	900 RJ	Note 1
F513	Oil field water, Dirty water drain, Service gas.	H03	Corrosive hydrocarbons (gas or liquids) (CO ₂ light corrosion), Corrosive production gas (HP gas, CO ₂ light corrosion)	Carbon Steel	3.00	1500 RJ or Hub connectors	Note 3 + Note 23
	No reference	H03N	Corrosive hydrocarbons (Intermediate Sour Service), Corrosive production gas hydrocarbon (Intermediate Sour Service)	Carbon Steel	3.00	1500 RJ or Hub connectors	Note 1

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Elf	Service	Total	Service	Material	Corrosion allowance	Rating	Significant Differences are detailed into hereunder notes
	No reference	J03	Corrosive hydrocarbons (gas or liquids) (CO ₂ light corrosion), Corrosive production gas (HP gas, CO ₂ light corrosion), Injection water (light corrosion)	Carbon Steel	3.00	2500 RJ or Hub connectors	Note 1
	No reference	K03	Corrosive hydrocarbons (gas or liquids) (CO ₂ light corrosion)	Carbon Steel	3.00	API 5000 or Hub connectors	Note 1
	No reference	L03	Corrosive hydrocarbons (gas or liquids) (CO ₂ light corrosion) High Pressure Fluid Service as per ASME B31.3	Carbon Steel	3.00	API 10000 or Hub connectors	Note 1
	No reference	L03N	Corrosive hydrocarbons (Intermediate Sour Service) High Pressure Fluid Service as per ASME B31.3	Carbon Steel	3.00	API 10000	Note 1 (Hub connectors)
B523	Liquid or gaseous hydrocarbons, Oil field water, with H ₂ S precautions	B03S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service), Corrosive flare gas lines (Severe Sour Service)	Carbon Steel	3.00	150 RF	Note 3 + Note 4
	No reference	B03D	Liquid sulphur, Acid gas (jacketed lines)	Carbon Steel	3.00	150 RF	Note 1
	No reference	B03N	Rich amine, Sodium hydroxide (Intermediate Sour Service)	Carbon Steel	3.00	150 RF	Note 1
	No reference	B05S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service)	Carbon Steel	5.00	150 RF	Note 1

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	No reference	B06S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service)	Carbon Steel	6.00	150 RF	Note 1
C523	Liquid or gaseous hydrocarbons, Oil field water, with H ₂ S precautions	D03S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service)	Carbon Steel	3.00	300 RF	Note 3 + Note 4
	No reference	D05	Corrosive hydrocarbons (gas or liquids) (CO ₂ medium corrosion)	Carbon Steel	5.00	300 RF	Note 1
	No reference	D05S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service)	Carbon Steel	5.00	300 RF	Note 1
	No reference	D06	Corrosive hydrocarbons (gas or liquids) (CO ₂ heavy corrosion)	Carbon Steel	6.00	300 RF	Note 1
D523	Liquid or gaseous hydrocarbons, Oil field water, with H ₂ S precautions	F03S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service)	Carbon Steel	3.00	600 RF	Note 3
	No reference	F05	Corrosive hydrocarbons (gas or liquids) (CO ₂ medium corrosion)	Carbon Steel	5.00	600 RF	Note 1
	No reference	F05S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service)	Carbon Steel	5.00	600 RF	Note 1
	No reference	F06	Corrosive hydrocarbons (gas or liquids) (CO ₂ heavy corrosion)	Carbon Steel	6.00	600 RF	Note 1
	No reference	F06S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service)	Carbon Steel	6.00	600 RF	Note 1
E523	Liquid or gaseous hydrocarbons, Oil field water, with H ₂ S precautions	G03S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service), Corrosive production gas (HP gas, Severe Sour Service)	Carbon Steel	3.00	900 RJ	Note 3 + Note 24

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Elf	Service	Total	Service	Material	Corrosion allowance	Rating	Significant Differences are detailed into hereunder notes
	No reference	G05	Corrosive hydrocarbons (gas or liquids) (CO ₂ medium corrosion), Corrosive production gas (HP gas, CO ₂ medium corrosion)	Carbon Steel	5.00	900 RJ	Note 1
	No reference	G06	Corrosive hydrocarbons (gas or liquids) (CO ₂ heavy corrosion), Corrosive production gas (HP gas, CO ₂ heavy corrosion)	Carbon Steel	6.00	900 RJ	Note 1
F523	Liquid or gaseous hydrocarbons, Oil field water, with H ₂ S precautions	H03S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service), Corrosive production gas (Severe Sour Service)	Carbon Steel	3.00	1500 RJ or Hub connectors	Note 3 + Note 23
	No reference	H05	Corrosive hydrocarbons (gas or liquids) (CO ₂ medium corrosion), Corrosive production gas (HP gas, CO ₂ medium corrosion)	Carbon Steel	5.00	1500 RJ or Hub connectors	Note 1
	No reference	H05S	Corrosive hydrocarbons (gas or liquids) (Severe Sour Service), Corrosive production gas (HP gas, Severe Sour Service)	Carbon Steel	5.00	1500 RJ or Hub connectors	Note 1
	No reference	H06	Corrosive hydrocarbons (gas or liquids) (CO ₂ heavy corrosion), Corrosive production gas (HP gas, CO ₂ heavy corrosion)	Carbon Steel	6.00	1500 RJ or Hub connectors	Note 1